

September 1992

MILITARY AIRLIFT

Greater Use of Peacetime Airlift Cargo Capacity Would Reduce Costs



**National Security and
International Affairs Division**

B-249518

September 16, 1992

The Honorable Richard B. Cheney
The Secretary of Defense

Dear Mr. Secretary:

In peacetime, the Air Force's cargo aircraft on overseas training missions routinely operate at less than full capacity. The Department of Defense (DOD) has a program to use this capacity by having the aircraft carry cargo that DOD would otherwise ship by commercial surface carriers. We reviewed DOD's peacetime airlift cargo operations to determine (1) how efficiently its overseas airlift capacity is being used and (2) the potential for improved efficiency.

Results in Brief

The Air Force's cargo aircraft flying regular overseas missions continue to operate with substantial amounts of unfilled capacity. In fiscal years 1988 and 1989, for example, Air Force cargo aircraft flying overseas routes were filled to an average of about 62 percent of capacity. The Air Force estimates that in fiscal year 1992 the aircraft will fly these routes at an average of about 64 percent full. At the same time, large quantities of lower priority DOD cargo still move overseas by commercial surface transportation at substantial cost. If military air terminals used already existing cargo backlog reports and separated lower priority from high priority cargo, DOD could take advantage of the fact that lower priority cargo can be kept at terminals longer. DOD then could better coordinate cargo with airlift and increase the use of available cargo capacity. We calculate that the improved coordination would enable the Air Force's overseas cargo aircraft to carry more of the lower priority goods normally carried by commercial surface transportation and reduce DOD's overall transportation costs by at least \$21 million per year. Rather than paying commercial carriers, DOD would reimburse the revolving fund set up to offset the costs of maintaining airlift readiness.

Background

DOD equips and operates a military airlift capability during peacetime which provides training to ensure readiness to meet military requirements during war and contingencies. DOD policy provides that the services will use this airlift capability for overseas movement of goods and materiel when it is available. Such use helps offset the cost of airlift readiness training, thereby reducing DOD's overall transportation costs.

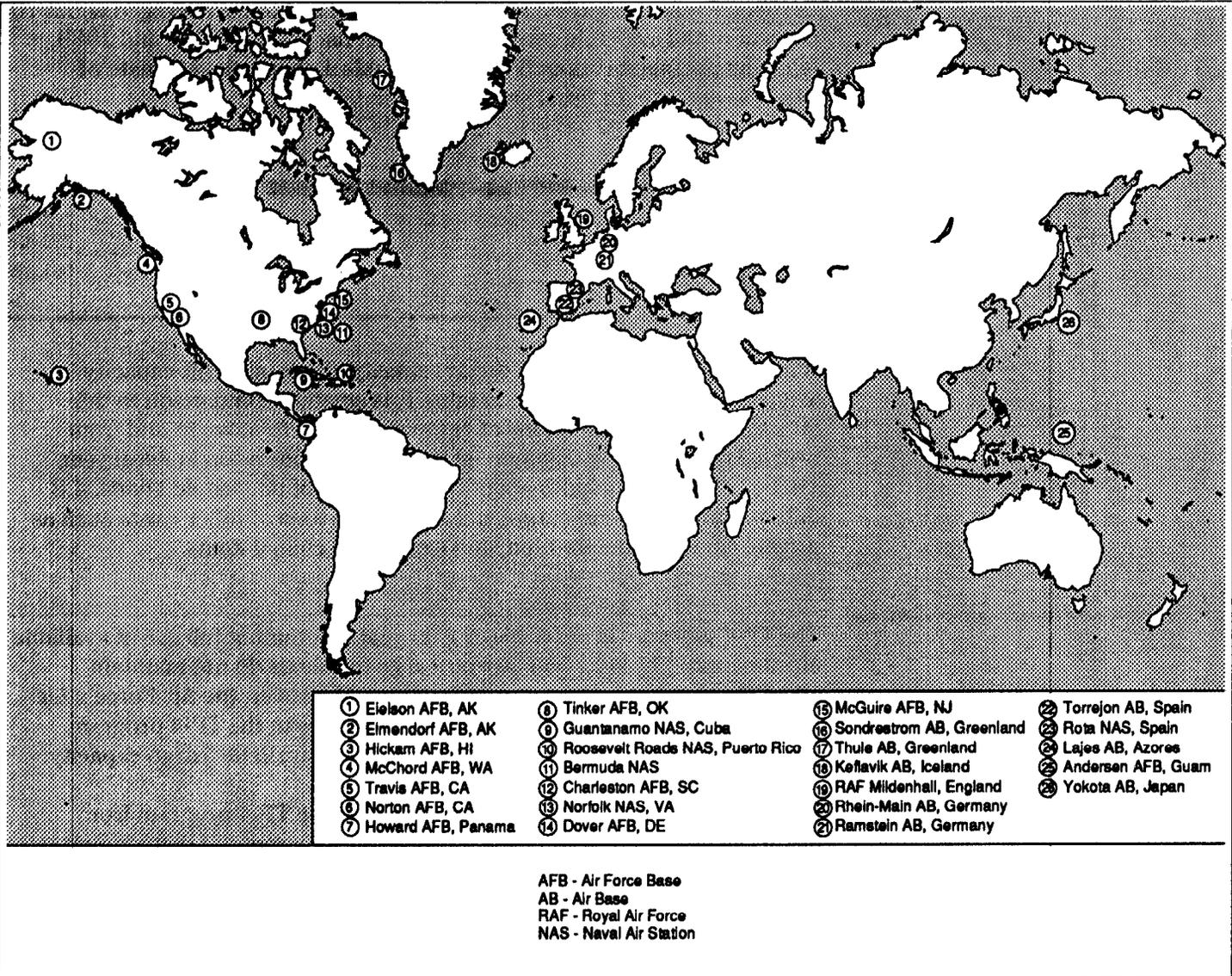
Air Force C-5, C-141, and, to a lesser extent, KC-10 and C-130 aircraft regularly fly overseas training missions in peacetime over fixed routes referred to as "channels." Figure 1 is a map of the worldwide locations from which the Air Force regularly flies airlift training missions. These missions provide airlift cargo capacity that the services can use to support overseas forces.¹ Peacetime flying hours to meet overseas training requirements are expected to continue to produce cargo capacity despite anticipated reductions in U.S. forces.

To classify cargo for shipment, DOD uses three transportation priorities based on the needs of ordering customers. Transportation Priorities 1 and 2 (TP-1 and TP-2) are for high-priority cargo, cargo that is needed quickly. Military terminals must ship high-priority outbound cargo within 3.5 to 4.5 days. Transportation Priority 3 (TP-3) is for routine needs and normally moves by commercial surface transportation. In contrast, terminals can hold TP-3 cargo for up to 20 days.

In the late 1960s, DOD initiated a program to take advantage of unused cargo capacity on military flights coming to the United States from overseas. This program, later named the TP-4 program, used TP-3 cargo as "filler" on those flights. In 1984, the Air Force expanded the TP-4 program to include, with some restrictions, cargo outbound from the continental United States.

¹Commercial air carriers that participate in the Civil Reserve Air Fleet also fly overseas missions for DOD during peacetime. However, this report addresses only the unused cargo capacity of the military aircraft.

Figure 1: Worldwide Locations From Which the Air Force Regularly Files Airlift Training Missions



Airlift Capacity and Cargo Is Available

Decreasing cargo workload has lowered the use of airlift aircraft space. Between fiscal years 1982 and 1987, channel airlift use averaged about 70 percent of the available cargo capacity.² In fiscal years 1988 and 1989, it fell to an average of about 62 percent. Table 1 shows the estimate of capacity and use for fiscal year 1992.

Table 1: Air Force Estimate of Channel Airlift Cargo Capacity and Use for Fiscal Year 1992 (in tons)

Cargo capacity	444,724
Cargo requirements	283,395
Unused capacity	161,329
Percent utilization	64

While significant in terms of airlift capacity, the total airlift capacity available and unused, shown in table 1, is small in comparison to the approximately 8 million tons of cargo scheduled to move to and from overseas locations by commercial surface transportation in fiscal year 1992. This cargo includes about 500,000 tons of household goods, 4.8 million tons of general cargo, and 2.9 million tons of other cargo such as private vehicles, ammunition, and frozen and chilled items.

TP-4 Program Not Achieving Its Goal

The TP-4 program is not achieving its goal of attaining full use of available airlift capacity because military air cargo terminals do not maintain adequate backlogs of lower priority cargo. Moreover, the Air Force's Air Mobility Command (AMC) allocates cargo space to the TP-4 program based on a formula that purposely understates available cargo capacity.

AMC initially calculates cargo allocations for the TP-4 program from historical airlift utilization data. However, it then reduces that amount by one-half, and in some cases more, to arrive at allocations for the military services and air terminals. These reductions result from AMC's concern that the TP-4 program might cause air terminal backlogs and thus increase rather than decrease commercial airlift buys to move this cargo. However, as a result of the reduced allocations, the terminals frequently do not have enough lower priority cargo to "fill" departing aircraft.

²Our calculations of available cargo capacity are based on available pallet positions and are not based on the aircraft's maximum allowable weight.

In determining the need for commercial airlift procurements, the terminals have traditionally considered only the available reports on the total cargo backlog and not those reports on the relative priority of the cargo. However, the terminals maintain the type of information that will enable them to separate cargo backlogs by priority as well as airlift forecast data that could be used to control TP-4 cargo flow and backlogs. Air Force airlift officials agreed with our conclusion that terminals should be able to manage increased quantities of TP-4 cargo without having to procure additional commercial airlift to move it in a timely fashion.

Unused Airlift Capacity Means Higher Transportation Costs

Improved use of excess airlift capacity would lower DOD's overall transportation costs by shifting payments for transportation currently made to commercial carriers to the revolving fund that the Air Force uses to support its peacetime airlift operations. Based on our 3-month analysis of unused pallet positions on overseas cargo flights originating and terminating at continental U.S. terminals, we estimate that unused capacity is currently at least 43,000 tons annually. The full use of this space with lower priority, TP-4 cargo could provide about \$21 million per year in additional revenues to the revolving fund used to offset airlift readiness training costs. Appendix I has a breakdown of the estimated unused capacity and additional revenues.

Our analysis covers only about one-quarter of the total unused airlift capacity because utilization reports contained data only for the first outbound destination and the last inbound destination. Additional savings could also be realized through increased use of the TP-4 program on flights operating within overseas areas. Many of these flights have additional overseas destinations that may also have unused airlift capacity. Better use of that capacity could provide additional revenue, beyond the estimated \$21 million, for the revolving fund.

Recommendation

To better use available airlift capacity, we recommend that the Secretary of Defense direct the Commander of the United States Transportation Command to allocate the maximum amount of unused channel cargo space feasible to the military services and air terminals for TP-4 cargo. Air terminals should distinguish backlogs between high- and low-priority cargo and manage cargo flows and backlogs with the goal of optimally using available airlift space.

Scope and Methodology

We performed work at the Office of the Secretary of Defense and Air Force Headquarters; United States Transportation Command and Air Mobility Command, Scott Air Force Base, Illinois; 22nd Air Force, Travis Air Force Base, California; and 60th Airlift Wing, Travis Air Force Base, California. We also obtained information from the Army, Navy, Military Sealift Command, Air Force Logistics Command, Navy Material Command, Defense Commissary Agency, Army and Air Force Exchange Service, and Air Clearance Authorities of the military services.

We interviewed officials and reviewed airlift policies, procedures, cost reports, and airlift utilization data. To determine unused aircraft pallet positions and tonnage availability, we analyzed channel cargo utilization reports for aircraft departing and arriving the United States for August through October 1991. We then applied the channel tariffs to arrive at revenue estimates. We performed our work between July 1991 and June 1992 in accordance with generally accepted government auditing standards.

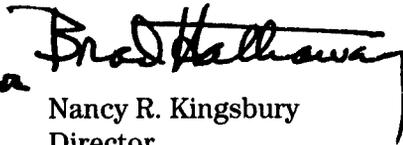
We did not obtain written comments on this report. However, we discussed the matters addressed in this report with Air Force and DOD officials and incorporated their comments as appropriate. Those officials agreed with our conclusion that opportunities are available to reduce transportation costs by greater use of the peacetime airlift capacity.

As you know, 31 U.S.C. 720 requires the head of a federal agency to submit a written statement on actions taken on our recommendation to the Senate Committee on Governmental Affairs and the House Committee on Government Operations not later than 60 days after the date of this report and to the House and Senate Committees on Appropriations with the agency's first request for appropriations made more than 60 days after the date of this report.

We are also sending copies of this report to the Secretary of the Air Force, the Commander of the United States Transportation Command, the Director of the Office of Management and Budget, and appropriate congressional committees. We will make copies available to other interested parties upon request.

If you or your staff have any questions about this report, please contact me on (202) 275-4268. Major contributors to this report are listed in appendix II.

Sincerely yours,

ja 

Nancy R. Kingsbury
Director
Air Force Issues

Estimated Annual Unused Channel Capacity and Revenue by Geographic Area

Geographic area	Outbound cargo	
	Unused capacity (tons)	Estimated revenue (thousands of dollars)
Travis Air Force Base, CA, to:		
Alaska	946.2	\$1,189
Japan	429.6	269
Hawaii	3,762.0	640
Guam	216.0	193
McChord Air Force Base, WA, to:		
Aleutians	228.0	202
Alaska	325.2	307
Japan	79.2	50
Norton Air Force Base, CA, to:		
Hawaii	342.6	58
Tinker Air Force Base, OK, to:		
Germany	154.8	147
Dover Air Force Base, DE, to:		
Germany	2,617.8	681
Spain	511.2	276
Charleston Air Force Base, SC, to:		
Scotland	163.2	91
England	205.6	113
Panama	709.8	251
McGuire Air Force Base, NJ, to:		
Greenland	540.0	310
Azores	472.8	419
Norfolk Naval Air Station, VA, to:		
Iceland	180.0	157
Spain	411.0	222
Cuba	288.6	143
Puerto Rico	96.0	40
Bermuda	150.0	86
Total outbound	12,829.6	\$5,844

Appendix I
Estimated Annual Unused Channel Capacity
and Revenue by Geographic Area

Geographic area	Outbound cargo	
	Unused capacity (tons)	Estimated revenue (thousands of dollars)
To Continental United States From:		
Greenland	713.4	\$409
Germany	4,631.4	1,204
England	1,338.6	491
Spain	2,193.0	1,184
Azores	2,371.2	2,102
Panama	2,316.6	819
Cuba	1,146.6	569
Alaska	4,908.0	5,812
Guam	456.0	407
Hawaii	8,394.0	1,427
Japan	766.8	481
Korea	6.0	4
Okinawa	300.0	203
Puerto Rico	1,078.8	446
Total Inbound	30,620.4	\$15,558
Total outbound/Inbound	43,450.0	\$21,402

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